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(51) INT CL<sup>7</sup>  
**A45C 13/10**

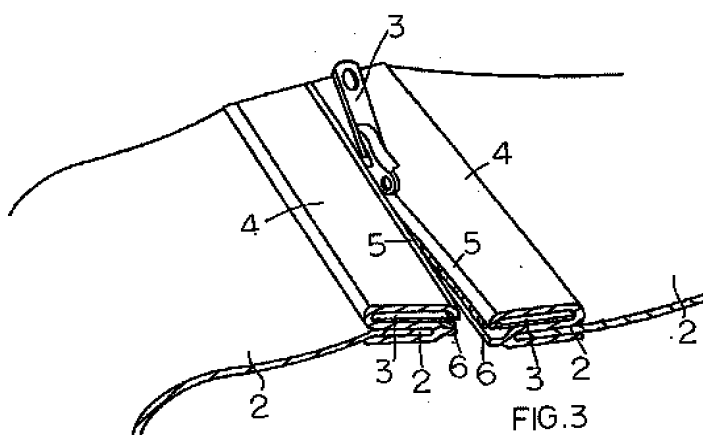
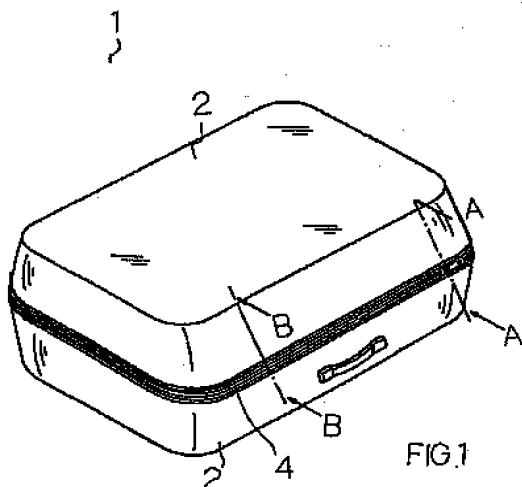
(52) UK CL (Edition T )  
**A4G G5B G5T10**

(56) Documents Cited  
**GB 2190133 A** **GB 0960295 A**  
**GB 0529056 A** **GB 0396589 A**  
**EP 0116190 A1**

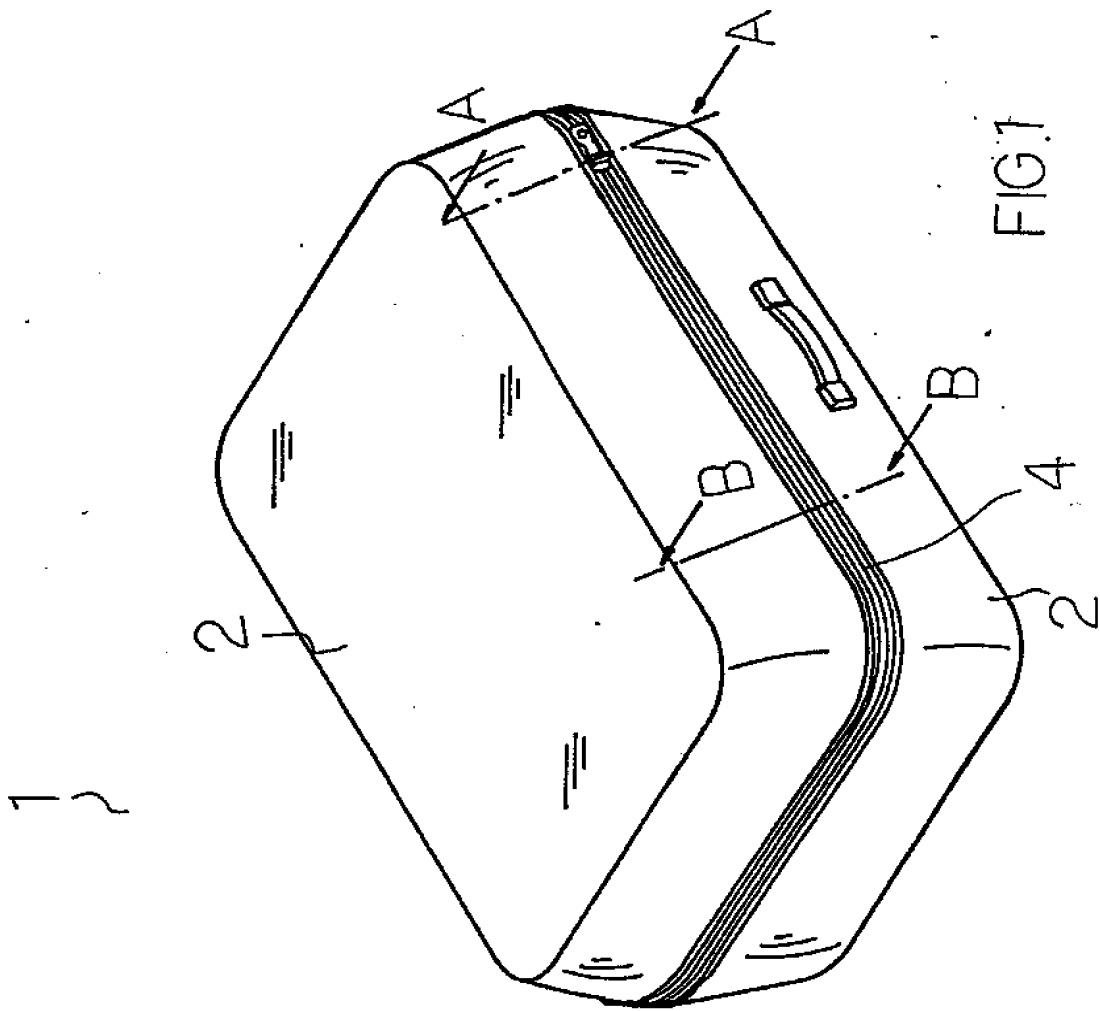
(58) Field of Search  
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INT CL<sup>7</sup> **A45C 3/02 3/04 3/06 3/10 13/10 13/36**  
Online: **WPI, EPODOC, JAPIO**

(54) Abstract Title  
**Suitcase with zip closure**

(57) A suitcase 1 comprising two parts 2 has a zipper assembly 3 sewn along the lateral edges of the case parts such that closure of the zipper draws the two parts together to form a single structural entity. The zipper assembly 3 includes two protective strips 4 fixed adjacent to the edges of the suitcase parts, each protective strip 4 having elements 5, 6 which abut one another when the zipper is closed, thereby forming an additional seal which prevents the ingress of insects and other foreign objects into the suitcase upon closing the zipper. The protective strips 4 may be formed from a waterproof material in order that they prevent the ingress of water through the zipper assembly 3 when the zipper is closed.



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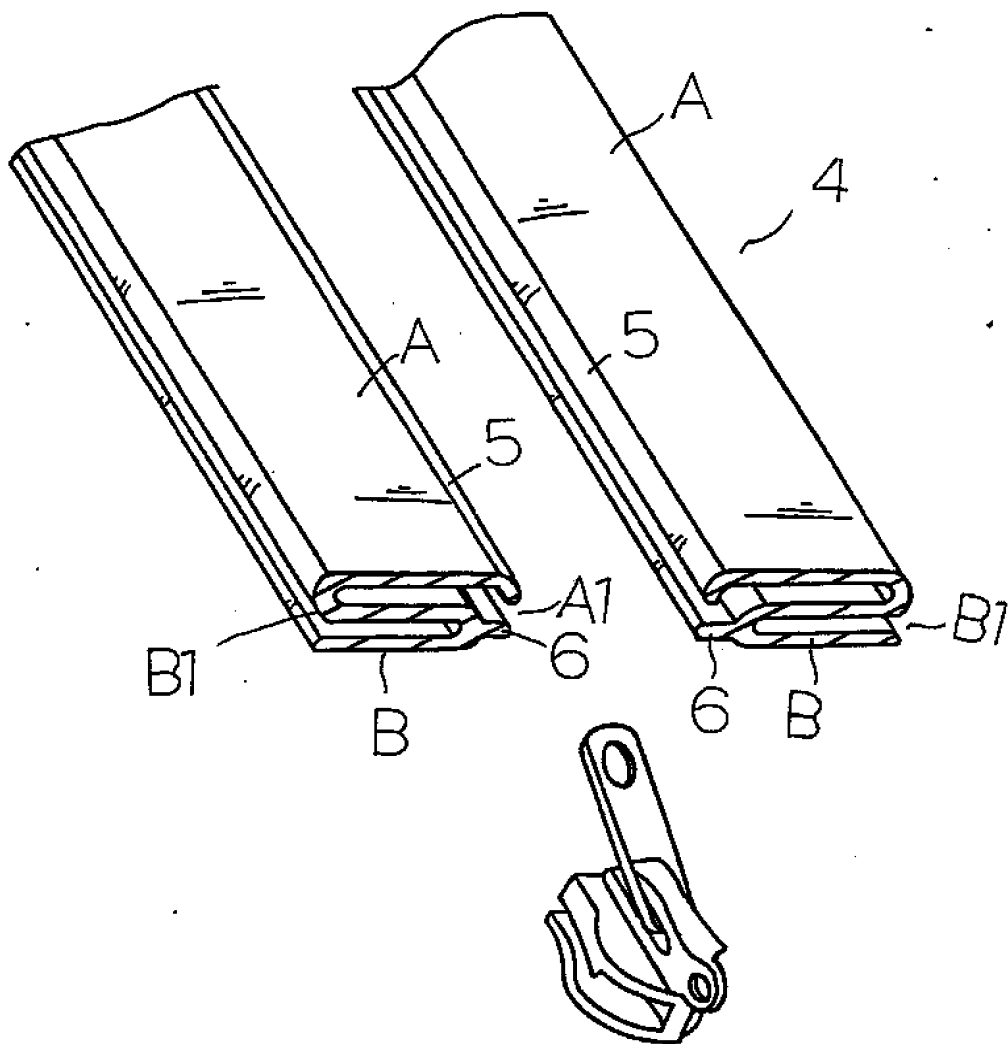
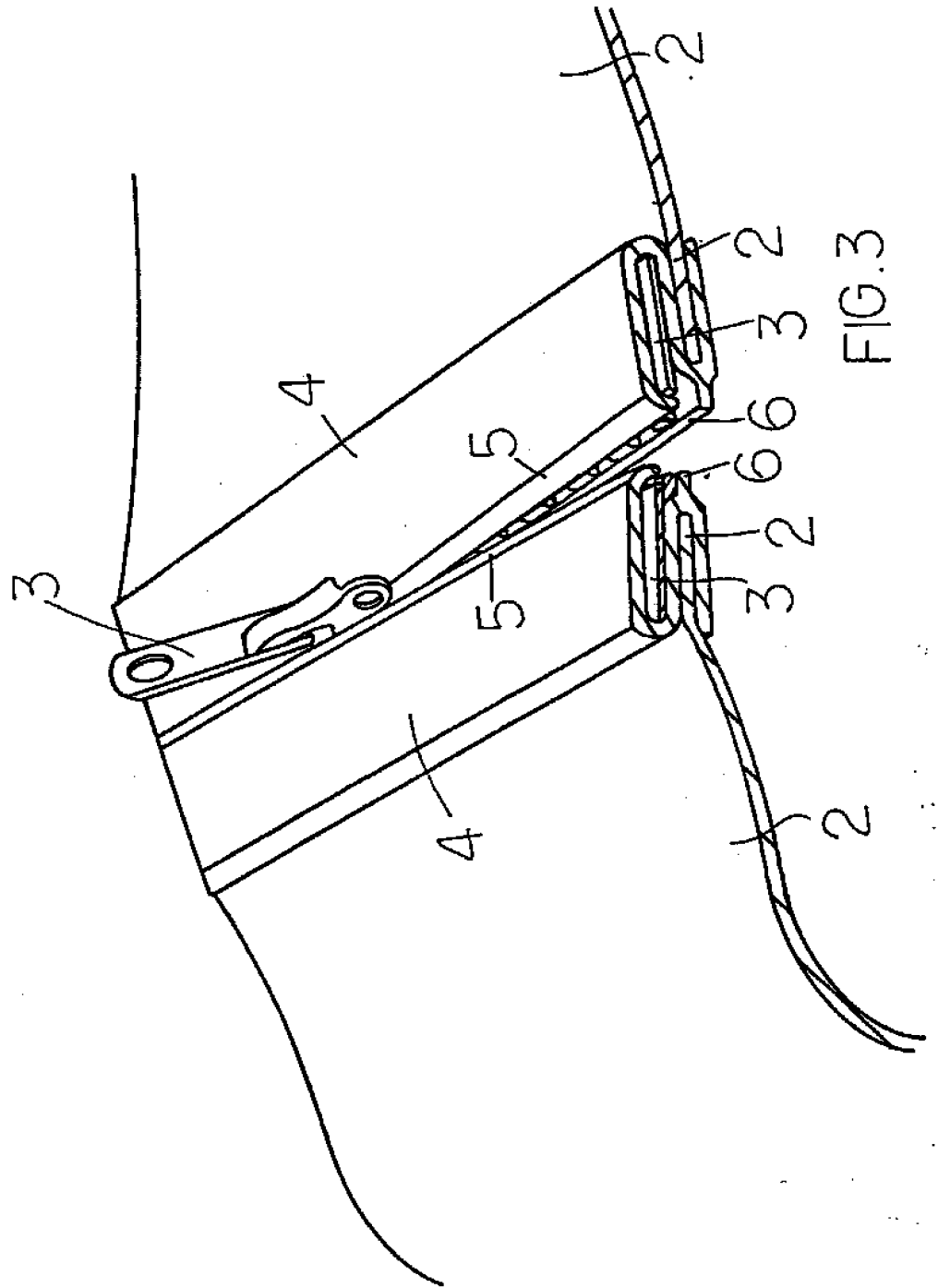


FIG. 2



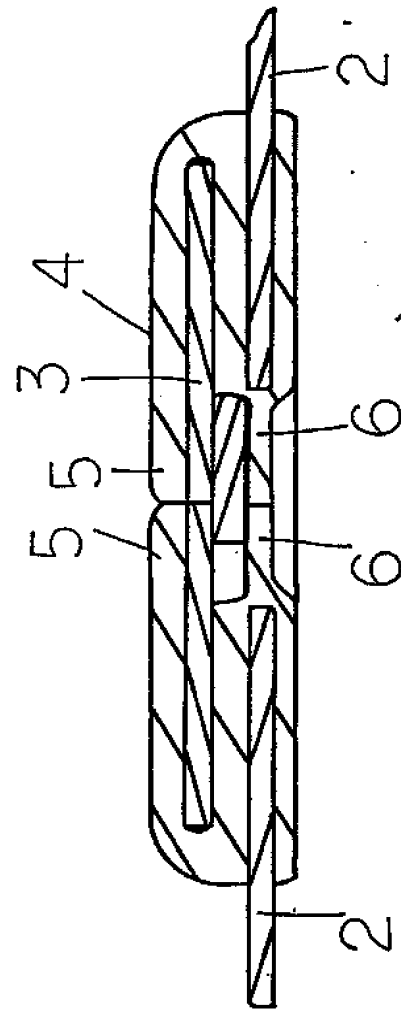
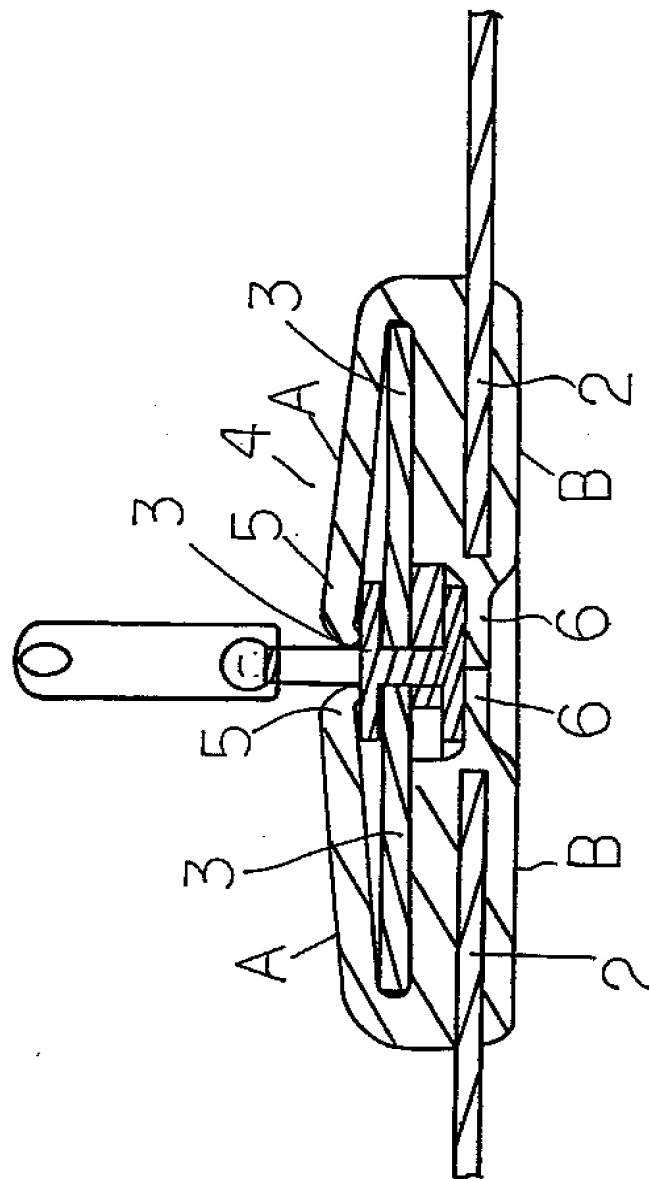


FIG. 4



## IMPROVED SUITCASE

## DESCRIPTION OF THE PRIOR ART

In conventional suitcases, a zipper is typically situated along  
5 the lateral edges of the case halves constituting the entrance, with  
the zipper enabling the closing or opening of the case halves ;  
however, since the zipper is exposed on the exterior of the suitcase  
and, furthermore, minute gaps are present in the zipper, foreign  
objects easily enter the interior of the suitcase from the outside.  
10 Since this includes ants and other insects, dust, and even rainwater,  
the clothing enclosed in the suitcase is a source of needless anxiety  
in that they are subject to damage, which is among the  
shortcomings and unsolved problems of conventional suitcases.

## 15 SUMMARY OF THE INVENTION

The primary objective of the invention herein is the  
improvement of conventional suitcases that are objects of easy  
ingression by ants and other insects, dust, and even rainwater,  
resulting in needless anxiety because of damage to the clothing  
20 enclosed in the suitcase; as such, the suitcase halves of the present

invention are each additionally equipped with a protective strip to increase suitcase sealing by abutment and thereby achieve a more progressive arrangement.

#### BRIEF DESCRIPTION OF THE DRAWINGS

5           Figure 1 is an isometric drawing of the invention herein.

          Figure 2 is an isometric drawing of the protective strip structure of the invention herein.

          Figure 3 is an isometric, partial cross-sectional drawing of an embodiment of the closure structure of the invention herein.

10           Figure 4 is a cross-sectional drawing of FIG.1 as viewed from the perspective of line B-B. (The said protective strip is fully abutted after the operation of the zipper into a tightly closed state.)

          Figure 5 is a cross-sectional drawing of FIG.1 as viewed from the perspective of line A-A. (The protective strip during the closure  
15   operation of the zipper.)



## DETAILED DESCRIPTION OF THE INVENTION

Referring to FIG. 1, FIG. 2, FIG. 3, and FIG. 4, in the improved suitcase of the invention herein, the said suitcase 1 is comprised of two case halves 2 and a zipper 3 assembly sewn along the lateral edges at the opening of the case halves 2 such that the closure of the zipper 3 causes the two case halves 2 to be drawn together into a single structural entity; the innovative features of which include : a protective strip 4 is fixed along each of the adjacent edges at the opening of the two case halves 2 and the said protective strips 4 are both in a correspondingly matched arrangement in that each protective strip 4 is horizontally cross-sectioned into an S-shape consisting of an upper and lower layer A and B, respectively, with the upper layer A near the opening A1 edge formed into a curved upper abutment element 5 and the lower layer B formed into a projecting lower abutment element 6 and, furthermore, an opening is formed in both the upper and lower layers A and B, of which the upper opening A1 accommodates the entry of the zipper 3 and the lower opening B1 provides for the entry of the case half 2 edge; utilizing the zipper 3 and the protective strip 4 sewn and thereby fixed onto the case halves 2, when the

zipper 3 is fully closed, the upper abutment element 5 of the said protective strip 4 is in a state of closure with the lower abutment element 6 such that the doubled layers are protectively flush and thus sealed to effectively prevent the ingress of insects such as ants and foreign objects.

In summation of the foregoing section, since the suitcase having a double-layer protective abutment innovation of the invention herein is capable of effectively preventing the ingress of insects such as ants as well as foreign objects and, within the confines of future technical development, improves upon the existent shortcomings to enable an even more practical product, the present invention meets the patent requirements of progressiveness and is submitted to the patent bureau for review and the granting of the commensurate patent rights.

### **CLAIMS:**

1. A suitcase or other carrying case comprising two case halves or parts and a zipper assembly sewn along the lateral edges at the opening of the said case halves or parts such that the closure of the zipper assembly causes the two case parts or halves to be drawn together into a single structural entity; wherein a protective strip is fixed along each of the adjacent edges at the opening of the two case halves or parts and the protective strips are both in a correspondingly matched arrangement in that each protective strip has an S-shape cross section consisting of a first and second layer respectively, with the first layer at the top opening edge formed into a curved first abutment element and the second layer at the bottom edge formed into a projecting second abutment element and, furthermore, an opening is formed in both the first and second layers, of which the first opening accommodates the entry of the zipper and the second opening accommodates the entry of the said case half or part edges; the zipper and the protective strips being sewn and thereby fixed onto the case halves or parts; wherein when the zipper is fully closed, the first abutment elements and the second abutment elements of each protective strip are respectively in a state of closure with one another such that the double layers are protectively flush and thus sealed to effectively prevent the ingress of insects such as ants and foreign objects.
2. A suitcase as claimed in claim 1 in which the protective strip is a waterproof, pliant body and the said first abutment element is of a curved profile.
3. A suitcase or other carrying case comprising two case halves or parts interconnectable by a zipper closure assembly, a protective strip being attached adjacent the peripheral edge of each case half or part such that, when the zipper assembly is closed to close the suitcase, the protective strips abut each other to resist the ingress of insects, or other foreign objects into the suitcase.

4. A suitcase as claimed in claim 3 wherein the protective strips are formed from a waterproof material such that they resist the ingress of water into the suitcase when the zipper is closed.
5. A suitcase as claimed in claim 4 wherein each protective strip comprises an elongate strip having an S shaped cross-section defining first and second substantially parallel elongate outer layers interconnected by a substantially parallel elongate inner layer therebetween, the first elongate outer layer and the elongate inner layer defining therebetween a first receiving portion into which is received and secured one half of the zipper assembly, the second elongate outer layer and the elongate inner layer defining therebetween a second receiving portion into which a peripheral edge of a respective case part is received and secured.
6. A suitcase as claimed in claim 5 wherein the free edges of the first outer layers of the respective protective strips abut each other when the zipper assembly is closed.
7. A suitcase as claimed in claim 5 wherein the respective portions of each protective strip adjoining the inner and second outer layers abut each other when the zipper assembly is closed.
8. A suitcase as claimed in claim 5 wherein both the free edges of the first outer layers of the respective protective strips and the respective portions of each protective strip adjoining the inner and second outer layers abut each other respectively above and below the zipper assembly when the zipper assembly is closed.
9. A protective strip for use with a zipper assembly on a suitcase as claimed in any of claims 1 to 8.

10. A zipper closure assembly comprising first and second zipper parts each having a plurality of teeth, the teeth of the first part being adapted to engage with the teeth of the second part in order to close the zipper, wherein first and second protective strips are associated with the first and second zipper parts respectively such that, when the zipper is closed, the first and second protective strips abut one another to resist the ingress of insects or other foreign objects through the zipper assembly.

11. A zipper closure assembly as claimed in claim 10, wherein the first and second protective strips are formed from a waterproof material such that they resist the ingress of water through the zipper assembly when the zipper is closed.

12. A suitcase substantially as herein before described with reference to the accompanying drawings.

13. A zipper closure assembly substantially as herein before described with reference to the accompanying drawings.



INVESTOR IN PEOPLE

**Application No:** GB 0021963.4  
**Claims searched:** All

**Examiner:** Brendan Donohoe  
**Date of search:** 6 February 2001

## **Patents Act 1977**

### **Search Report under Section 17**

#### **Databases searched:**

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK Cl (Ed.S): A4G; E2S (SHX, SXX)

Int Cl (Ed.7): A45C: 3/02, 3/04, 3/06, 3/10, 13/10, 13/36

Other: Online: WPI, EPODOC, JAPIO

#### **Documents considered to be relevant:**

Category	Identity of document and relevant passage	Relevant to claims
X	GB 2190133 A (YOSHIDA) - See whole document, especially figure 1	9,10,11
X	GB 960295 (COLIBRI) - See figures 1 and 2	9,10,11
X	GB 529056 (TYLER) - See figures 1 and 2	9,10,11
X, Y	GB 396589 (LEWIS) - See page 1 lines 20 - 52 and figure 8	X: 9,10,11 Y: 3,4
Y	EP 0116190 A1 (LEE) - See page 1 lines 19 - 24, and figure 1	3,4

X Document indicating lack of novelty or inventive step  
Y Document indicating lack of inventive step if combined with one or more other documents of same category.

& Member of the same patent family

A Document indicating technological background and/or state of the art.  
P Document published on or after the declared priority date but before the filing date of this invention.  
E Patent document published on or after, but with priority date earlier than, the filing date of this application.